THE

# VETERINARY JOURNAL

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## Biography

### William Tempest Olver, J.P., M.R.C.V.S.

It is good for our profession that its members shall take interest in municipal affairs, and the subject of our biographical note is, in particular, an example of one whose family has done its duty in this respect ; as his father and grandfather had each occupied the Mayoral Chair.

As the son of the late Mr. Harry Olver, F.R.C.V.S., whose name as an Examiner was so well known and beloved by scores of veterinary graduates, Councillor William Tempest Olver commenced his career in the profession under very favourable auspices. By the wish of his father he entered the London Veterinary College immediately upon leaving School, taking his diploma in 1901 after a highly creditable student career.

This was the time of the South African War and, under the ægis of the Army Veterinary Corps, Mr. Olver joined up to help.

In 1902 he joined his father in private practice and, upon this popular gentleman's much regretted death in 1903, he took over the responsibility of a very large *cliéntele*, the duties of which included two Veterinary Inspectorships in the Counties of Staffordshire and Warwick.

In 1920 he was first elected to the Town Council and since then he has occupied numerous municipal positions of responsibility, positions in which he has had the opportunity of proving his worth. That he has succeeded is shown by the fact that he has now been unanimously selected to fulfil the position of Chief Magistrate of one of the most ancient boroughs of Great Britain ; a proud position on which we of the veterinary profession who are his colleagues send him our congratulations, and wish that he may have that good health and prosperity, which are so essential for the carrying out of such onerous duties as fall on one who occupies the combined positions of Mayor and Chief Magistrate.

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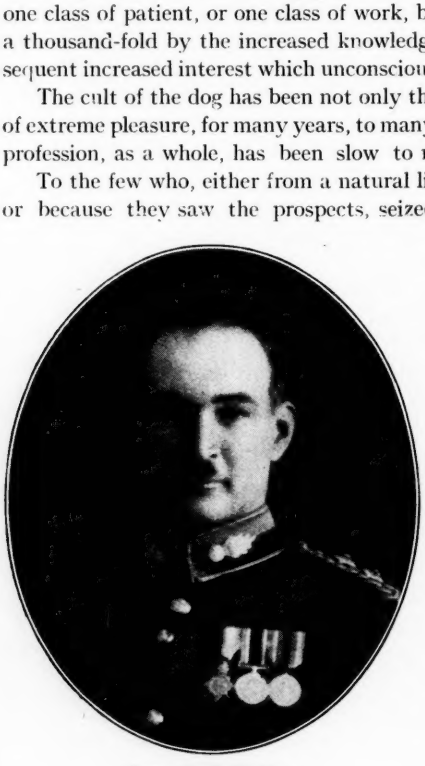
## Editorials

# A SPECIAL CHAIR OF CANINE MEDICINE FOR THE LONDON COLLEGE.

SPECIALISM has now become as well established in veterinary practice as in the human side of medicine, and the veterinary graduate of to-day finds that it not only pays him financially to concentrate on one class of patient, or one class of work, but that he is also rewarded a thousand-fold by the increased knowledge he acquires and the consequent increased interest which unconsciously comes into his daily life.

The cult of the dog has been not only the fashion, but also a source of extreme pleasure, for many years, to many people, and the veterinary profession, as a whole, has been slow to recognise their part in this.

To the few who, either from a natural liking for this class of work, or because they saw the prospects, seized the opportunity, canine practice led the way to a good livelihood; and, in some cases, a fortune.



Capt. H. E. Hobbs.

At last there is a movement to help the study of the diseases of the dog at the fountain head—i.e. the teaching schools—and by the kind help of certain dog lovers, foremost amongst whom are Mr. Sidney T. Lethbridge, the Managing Director of Spratts, Limited, and Capt. Hobbs, the energetic organiser of "The Tail-Waggers' Club," the sum of £20,000 was recently handed over to the custody of Sir Merrik Burrell, Bart., C.B.E., the Chairman of the Governors of the Royal Veterinary College, London, towards the endowment of a special Chair of Canine Medicine and Surgery: to be devoted entirely to the study of the ailments of dogs and for the relief of canine suffering. The greater part of this sum was obtained from "The Tail-Waggers' Club," an organisation

which owes its success to the extraordinary energy and wonderful organising power of its Secretary, Capt. Hobbs.

"The Tail-Waggers' Club" is an organisation which was only started at the latter end of 1928; and within the short space of time of some 13 or 14 months, has already reached the huge total of over a quarter of a million members. All dogs are eligible, and the joining subscription (which is only 2/-), after a deduction of a small proportion to cover office expenses, goes to further some canine project which tends to alleviate animal suffering. During the year which has just passed these funds have been allotted towards the establishment, as mentioned above, of a Chair of Canine Medicine and Surgery. This money will be devoted entirely to the teaching of the modern methods of treatment of Canine Ailments and the alleviation of Canine suffering.

The object is a good one and, as it includes work which will benefit the profession, it behoves the individual members of the profession to play their respective parts, and to reciprocate the generous sympathy and help which has been accorded as the result of the S.O.S. which the Royal Veterinary College issued a short time ago.

## ANOTHER GENEROUS GIFT TO THE ROYAL VETERINARY COLLEGE.

By the generosity of Messrs. Jesse Boot & Son, the well-known Chemists, the sum of £350 has been promised annually for at least three years, towards the expenses of the Chair of Pharmacology and Therapeutics in the Royal Veterinary College.

Such gifts are appreciated, not only by the College, which is doing its best under great difficulties to carry on its duties until the response of the Government to the urgent Report of the Parliamentary Inquiry Committee is known; but also by the profession, so many of whom revere the London College as their Alma Mater.

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# General Articles

## CANINE HYSTERIA IN LUNDS, 1929.

By R. A. SCOTT MACFIE, M.A., B.Sc.,
*Lunds, Sedbergh, Yorkshire.*

LUNDS is a mountainous district of small, widely separated sheep and dairy farms, situated near Hawes Junction (L.M.S. main line) at the head of three valleys : Wensleydale (North Riding of Yorkshire, running down to Leyburn and Northallerton), Garsdale (West Riding of Yorkshire, running down to Sedbergh), and Mallerstang (Westmorland, running down to Kirkby Stephen). There are also smaller dales in the neighbourhood, very remote and isolated, such as Cotterdale, Mossdale and Grizedale ; and Swaledale is not far distant.

" Canine hysteria " or " fright disease " as it is called in America, is said to have been prevalent at the lower end of Wensleydale a year ago, and in Swaledale. It reached Lunds late, about hay-time (July), 1929, and was recognized by the farmers as a new disease ; but dogs belonging to the fell-shepherd, who lives in Mallerstang, were affected in April, although the other farms in Mallerstang are still (November) free from the disorder. It was epidemic in Widdale and the neighbourhood of Hawes soon after it appeared in Lunds. Cases have occurred in Cotterdale, but the disease has not yet reached Garsdale, though there is said to have been one case in Grizedale.

If canine hysteria is infectious, the fell-shepherd, though he does not live in Lunds, has exceptional opportunities for spreading it, and the history of his dogs is therefore of interest in connection with our epidemic. In December, 1928, or January, 1929, one of them had three fits in a day and died during the following night. These fits, however, had none of the characteristics of hysteria. During the spring of 1929 he kept four dogs, two of which began to show characteristic symptoms in April. One of them (Floss), beginning with running madness, later developed falling fits, which became so frequent that she was shot in June. The other (Bell), having apparently recovered, was sold to a farmer in Mossdale and, although it had no attacks there, is sometimes blamed for introducing the disease into that neighbourhood. It was, however, returned after a few days and was afterwards sold to a Lunds farmer in whose possession it had one attack in the beginning of September. The shepherd's two other dogs showed no symptoms until the end of July. One of them (Jem) has never had falling fits but only attacks accompanied by running and barking. In

the case of the other (another Bell) the earlier attacks were characterized by standing, not running, and barking; but afterwards falling fits or paralytic seizures occurred. Neither of these two dogs has had an attack since the last week of August.

A census of dogs was taken on November 6th, 1929, the district examined being the head of Wensleydale from Aisgill Moor and Hell Gill farm on the border of Westmorland (or just over it) to Pry House towards Hardraw, Appersett and Hawes; a distance of 6½ miles by road, and including the branch dales of Cotterdale and Mossdale. This district contains 51 dwellings, of which 29 are farms, the other 22 being inhabited mostly by railwaymen. The results were as follows:

| | *Have had "Hysteria"* | *Have not had "Hysteria"* | *Total* |
|---|---|---|---|
| Working dogs .. .. .. | 16 | 43 | 59 |
| Sporting dogs .. .. .. | — | 6 | 6 |
| Pet dogs.. .. .. .. | — | 3 | 3 |
| Puppies .. .. .. .. | 6 | 9 | 15 |
| Total .. .. .. | 22 | 61 | 83 |

No adult dogs died of the disease though one was killed accidentally on the road when returning home after an attack of running madness. Two puppies died; but I think it is possible that, in the case of puppies, some different malady may have been mistaken for "hysteria." One of the sporting dogs had fits of some kind three years ago.

The distribution of the disease is erratic and it does not appear to have spread from each farm to its immediate neighbour. One farmer believed that dogs which were fed on wheat-meal suffered from the illness, while dogs fed on "Uveco" escaped. It has been, however, evidently most prevalent in that part of the area which is above, or to the north-west of, Thwaite Bridge, and includes Lunds proper.

| | *Farms* | | *Adult Working Dogs* | | |
|---|---|---|---|---|---|
| | *Affected* | *Free* | *Affected* | *Escaped* | *Total* |
| Thwaite Bridge and above .. .. | 8 | 6 | 13 | 15 | 28 |
| Cotterdale .. .. | 1 | 6 | 2 | 8 | 10 |
| Mossdale .. .. | 1 | 2 | 1 | 6 | 7 |
| Below Thwaite Bridge | 0 | 5 | 0 | 14 | 14 |
| Total .. .. | 10 | 19 | 16 | 43 | 59 |

Lunds is, in fact, a pathological island isolated by areas in which canine "hysteria" has not yet appeared. The rate at which the disease spreads seems to be very slow, and the farmers whose dogs have

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not yet contracted it are apprehensive that it will ultimately reach their farms.

The sheep-dogs of this district are worked hard and poorly fed, generally on meal, or "Uveco," and skimmed milk: occasionally when they find a dead sheep on the fell, they are gorged for a time and lazy at their work. During hay-time (July) they get less attention than ever. They are also ill-housed, often sleeping on stone floors in draughty buildings, with no other bedding than a thin sprinkling of damp rushes. They suffer from worms and ticks, and in general get far less care and attention than would be expected considering the indispensable service they render and their pecuniary value. These points cannot, however, account for the disease, for there has been no recent change in the dogs' diet or treatment.

The attacks, which occur suddenly without warning of any sort, are of two kinds: (a) running madness, (b) falling fits. The running madness, again, appears in several forms: (1) the dog runs in circles barking, but generally recognises the voice of his master and obeys his orders. Sometimes it does not even run but stands still and barks; (2) the dog gives a bark and rushes straight home, jumping walls and obstacles; (3) the dog leaves its work, makes off in a bee-line across country, and may ultimately be found several miles away; (4) according to rumour the dogs sometimes rush blindly against obstacles such as walls. No actual instance has been reported, but in one case running madness occurred almost daily for two months, and the dog was then shot because it seemed to be growing blind.

The intervals between attacks may be very short, for instance, a few minutes, or in other cases weeks long. A dog that had his first attack on October 2nd has not yet had another. Fan of Quarry had no attacks between September 2nd and October 14th: Mat had none between September 29 and October 30. On the other hand some dogs, for example one belonging to the fell-shepherd, have had attacks almost every time they were released. Sometimes the dogs seem to be in a sensitive condition in which the slightest excitement—a hen running at them to protect her chickens, or a suddenly opened door—will bring on a fit. It is, of course, possible that attacks occur while the dogs are shut up and pass without notice, but this cannot explain the long intervals. The disease is not usually fatal, as will have been noticed from the statistics.

I have witnessed "running madness" only under control in a stable and the above description is from hearsay; the following accounts of attacks are from my own observation:

*"Mat," male sheep dog belonging to G. Harvey Ashton, Quarry Farm, Lunds, Sedbergh, Yorks.* Age, one year. Weight (on October 11,

after feeding up), 34 lb. Had had seven or eight attacks of running madness in July and August (the first probably on July 19), but none after the first week of September.

*Sunday, September 29th,* 1929. 10.5 a.m. Hearing a scuffle at the door I went and found my Alsatian standing in an attitude of triumph over Mat, who was in a fit, and my fox-terrier jumping round and barking. (Note : neither of these dogs has yet shown any symptom of the disease.)

Mat was lying on his left side convulsed by alternate spasms of two kinds : (1) a general rapid quivering, the four feet tending to approach one another, the neck bent back and the mouth open ; (2) although still prostrate on his left side, his legs moved as if he were running and his neck was bent down as if he were following a scent on the ground. During convulsions of this second kind he sometimes gave a curious short bark. In both cases a good deal of frothy saliva came from his mouth : it was glutinous and not easily swilled off the pavement with water. I stupidly omitted to observe the pulse, respiration and temperature, nor did I examine the eyes.*

10.10 a.m. The dog was quieter and the convulsions less violent. He raised himself a little, but his hind legs appeared to be weak or paralysed, and he could not stand. Gradually he recovered power to walk clumsily, falling often, failing to avoid obstacles, and apparently unable to co-ordinate the motions of his legs : sometimes he crossed his fore-feet. He generally fell on his left side.

10.20 a.m. Mat had so far recovered that I was able to encourage him to walk to the stable. He followed the wall on his left closely, leaning against it.

10.25 a.m. Mat walked about unsteadily in the stable, knocking things over, and took no notice of a dish of water offered, but upset it. The acute symptoms were over before 11 a.m., and he then drank water.

12.30 p.m. Mat ate a " Spiller's Meat " dog-biscuit (4½ oz.), was able to walk well and anxious to get out of the stable. At 3 p.m. he had water and another dog-biscuit ; and at 6.30 p.m. he ate greedily 11 ounces of " Osoko " soaked in hot water, and appeared very lively.

*Monday, September 30th,* 1929. Began to feed Mat generously, following—or exceeding—the advice of Colonel H. G. Bowes, F.R.C.V.S. of Leeds University, who had written : " I can only suggest that good nursing is necessary ; the dog being kept warm and its strength main-

* Two independent witnesses have since assured me that in these fits the dog sweats profusely all over. I did not observe this. One of them talking about "slavering fits" said of the sufferers : "they tift (pant) and they tift, and you can't see the heart working for some time."

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tained by giving a little meat extract such as Bovril occasionally, and in the early stages before nervous symptoms become very bad, ammoniated tincture of quinine from half to one teaspoonful in water may be given three times a day. After the nervous symptoms appear probably the best treatment is to keep the dog quiet and give ten-grain doses of potassium bromide three times a day." He had : 7 a.m., a biscuit (4½ oz.) ; 9.30 a.m., 7 oz. " Osoko " with a little milk ; 12.30 p.m., another biscuit. His bowels were moved ; and he was sick at about 2 p.m., but ate the vomit. At 2.45 p.m. he had another falling fit, less severe, in which he lay on his right side. Unfortunately I did not see the dog until 3.30 p.m., when he had recovered. At 6.30 p.m. he ate 11 oz. of " Osoko."

*Tuesday, October 1st,* 1929. Generous diet continued : viz. 7 a.m., biscuit ; 8 a.m., 7 oz. " Osoko " and a little milk ; mid-day, biscuit ; 3 p.m., biscuit ; 7 p.m., 11 oz. " Osoko " with a teaspoonful of Bovril.

*Wednesday, October 2nd,* 1929. 7 a.m., biscuit ; 8 a.m., 7 oz. " Osoko " with a teaspoonful of Bovril ; mid-day, biscuit. At 4 p.m. I gave him another biscuit, but took it away uneaten at 5 p.m., when Mat looked dull and listless, less lively than usual. This condition was probably due to over-feeding ; but thinking that it might be the after-effect of an unobserved fit, I followed the advice kindly given by Colonel H. G. Bowes and gave him 10 grains of ammonium bromide. At 7 p.m. the dog was still listless, but ate 11 oz. of " Osoko " with a teaspoonful of Bovril.

*Thursday, October 3rd,* 1929. 7 a.m., offered Mat a biscuit, but he only bit a corner off and I took it away at 9 a.m. At 3.30 p.m. I noticed that he had been sick. At 4.30 p.m. I gave him two " Nema " worm-capsules each containing 1 c.c. of tetrachlorethylene, in a little bacon-dripping.

*Friday, October 4th,* 1929. 7 a.m., gave him a heaped teaspoonful of Areca Nut mixed with bacon-dripping : this was followed by a motion of the bowels, but no worms were seen. 9 a.m., 11 oz. " Osoko " and a little milk. Mat, who had now been confined for five days in a dark stable, appeared less lively than usual, and I let him run about outside for an hour. 11 a.m. and 4 p.m., tablets of ammoniated quinine (each containing 1 grain of quinine sulphate) ; 8 p.m., 11 oz. " Osoko " with Bovril.

*Saturday, October 5th, to Saturday, October 12th,* 1929. During these eight days the dog was given the following diet : between 8 and 9 a.m., 11 oz. " Osoko " soaked with hot water and a teaspoonful of Bovril ; between 9 and 10 a.m., a tablet of ammoniated quinine (one grain quinine sulphate) ; between 3 and 4 p.m., quinine tablet ; between 6 and 7 p.m., " Osoko " and Bovril as above ; between 9 and 10 p.m.,

quinine tablet. From Sunday, October 6, onwards he was taken out at mid-day for an hour or more, generally on a lead. On Tuesday, October 8th, he refused his breakfast at 8 a.m., but ate it at 2.15 p.m. on his return from a walk. He ate his supper readily at 6 o'clock the same evening.

On Sunday, October 13th, 1929, he was returned to his master apparently in good health. We hoped, but dared not assume, that he was cured, for Mat had no attacks during the three weeks that preceded his exhibition on September 29th. Our doubts were justified and on Wednesday afternoon, October 30th, after some hard work, he had a short falling fit from which he recovered in less than five minutes On November 4th he weighed 37½ lb.

Mat's fits were short and he recovered rapidly. In the following case, of which I saw only the end and now describe from memory, the consequences lasted much longer :

*"Fan," female sheep-dog (mother of Mat) belonging to Arthur Ashton, Quarry Farm, Lunds, Sedbergh, Yorks.* Age uncertain, more than five years. Weight on November 7th, 32 lb. Her symptoms began later than Mat's, viz. in August, and she had only three or four attacks of running madness against Mat's seven or eight. A running attack occurred about 6 p.m. on Sunday, September 1st, 1929. She was ill and unable to walk all the next morning, and when I saw her about 1 p.m. that day (Monday, September 2nd) was very restless, wandering about aimlessly from one side of the road to the other, apparently comatose, and refusing to rest even when placed on a sack in the sun. She behaved as if she was blind, taking no notice of food placed in her way but walking over it, stumbling at obstacles and falling over banked edges. She was very weak and her hind legs appeared to be partly paralysed. Sometimes she collapsed altogether, slobbered at the mouth, and seemed to be about to die. She recovered gradually, however, without treatment, and in a few days was able to resume her usual work, but had a relapse on Monday, October 14th : two mild running attacks when bringing stock back from Hawes.

It seems probable that this dog, notwithstanding her relapse, will be able by her own strength to recover from the disease.

In the following case an attempt was made to ensure and hasten recovery by artificial means :

*"Fan" (Place), female sheep-dog (sister from the same litter as Fan of Quarry) belonging to Thomas Atkinson, Place Farm, Lunds, Sedbergh, Yorks.* Age uncertain, more than five years. Weight (on October 26th, after feeding up), 44 lb. A dog of quiet disposition, she is well tended by her master and was in good condition and fat, although she receives only the customary two daily feeds each consisting of about

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ten ounces of scalded meal and a pint of skimmed milk. She first developed canine " Hysteria " in the middle of August and had at intervals four attacks of running madness followed by two falling fits. Then on *Monday, October 14th*, 1929, she had three serious falling fits all on the one day. She was put in a dark stable and I saw her on Tuesday 15th and Wednesday, 16th October, looking well and arranged that her master should diet her at home under my directions, not working her but giving her a little exercise.

*Thursday, October 17th* and *Friday, October 18th*, 1929 : 8 a.m., 10 ounces meal, a pint of skimmed milk and a teaspoonful of Bovril ; 9 a.m., a tablet of ammoniated quinine (1 grain of quinine sulphate) ; 3 p.m., quinine tablet ; 8 p.m., meal, milk and Bovril ; 9 p.m., quinine tablet.

*Saturday, October 19th.* The dog was given neither food nor water after the quinine on the previous evening, in preparation for treatment to remove worms. When I visited her for this purpose she came out of her bed when called, but walked unsteadily as if she were just recovering from a fit. There was, however, no froth at the mouth.

11.30 a.m., three " Nema " capsules, each containing 1 c.c. tetrachlorethylene, in a little butter. 1.30 p.m., a heaped teaspoonful of Areca Nut powder mixed with bacon-dripping. 2 p.m., a pint of milk. 3 p.m., offered the dog a biscuit. She looked dull and refused it, but ate it later. She had had a normal motion of the bowels. 8 p.m., 10 ounces " Osoko," a pint of fresh milk, and a teaspoonful of Bovril. She ate her meal slowly and did not clean the dish. Diarrhœa at night : no worms seen. The dog had no quinine this day and was not taken out for exercise.

*Sunday, October 20th, to Saturday, October 26th.* During these seven days Fan had the same diet as on October 17th and 18th. She had a little exercise every day and on Friday, October 25th, was of necessity taken out for a short time to gather some sheep. She worked well and appeared to be improving in health.

*Sunday, October 27th*, 1929. She had her usual breakfast and quinine tablet in the morning. At 1.30 p.m. while out for exercise with her master, she had two attacks of running madness. The first was very short, the second longer. Her master held her to prevent her from running away, and on recovery she seemed as well as ever. He says that during these attacks her eyes turned green. Hearing about this relapse I visited the dog at 5 p.m., taking my Alsatian with me, and found the patient very friendly and playful. Suddenly her gait became abnormal and her master, seeing that an attack was coming, seized her by the collar and continued patting her side. Fan remained standing, gazing in front of her with a fixed stare that seemed to imply

unconsciousness, trembling, and barking sharply in a curious high-pitched voice. The attack lasted less than five minutes and was not followed by any apparent weakness. There was no slavering nor sweating, and she made no attempt to snap or bite. The attack may have been caused by excitement due to the presence of my Alsatian of whom Fan is afraid.

In consequence of this relapse I changed the dog's diet, substituting " Osoko " for meal, and ammonium bromide for quinine. The change began the same evening.

*Monday, October 28th, and Tuesday, October 29th,* 1929. 8 a.m., 10 ounces " Osoko," a pint of skimmed milk and a teaspoonful of Bovril. 9 a.m., 10 grains ammonium bromide. 3 p.m., 10 grains ammonium bromide. 8 p.m., " Osoko," milk and Bovril. 9 p.m., 10 grains ammonium bromide. She had a little exercise each day, and on the second day seemed less brisk than usual.

*Wednesday, October 30th,* 1929, and afterwards. For about a week the diet of October 17th and 18th was resumed, some " Osoko " being given at the beginning in place of meal, and Fan was gradually inured to her usual work.

The discouraging fact must be faced that Fan of Place, with all her dieting and drugs, made no better nor quicker a recovery than her sister, Fan of Quarry, who had no treatment of any sort.

The means by which the illness is spread are unknown here. The first dog in which it was observed in this neighbourhood belonged to the fell-shepherd, Philip Harrison, who seldom took it with him because it was a bad follower. In Mallerstang, where he lives, there had been no case before this, and there has been no case since, except among his dogs. The disease was prevalent at Middleham (at the lower end of Wensleydale) a year since ; but at the end of September, a pet dog belonging to Miss Topham had a mild fit. This dog never goes outside the grounds of Middleham House and never sees a strange dog. My Alsatian and fox-terrier, which frequently meet other dogs, were present at Mat's performance on September 29th, and were not kept away from him during his convalescence, but still show no symptoms. The third dog at Quarry Farm, where Mat and Fan live, has had no attacks ; and similar cases are common, reminding one of the two women grinding at the mill. This capricious incidence is difficult to explain unless some parasitic tick, insect or worm from which an individual dog, even when living in close association with others, may be free, is the carrier of a new infection.

The epidemic is so serious for the small farmers of this district, who are much dependent on their dogs, that it was thought advisable to circulate the following suggestions :

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**So-called "Canine Hysteria."**

Inquiries made from Lieut.-Colonel H. G. Bowes, F.R.C.V.S., of Leeds University, from authorities in London, and from other persons, show that although this illness, called in America "Fright Disease," has been know for several years, nobody can tell us what is its cause, how it is spread, nor how to cure it. In Lunds we have therefore followed advice given by Col. Bowes, and when a dog shows symptoms of the malady have tried to get it into a condition of good general health in the hope that its own strength will enable it to conquer the disease. We do not profess to have found a cure for canine "Hysteria," and indeed a dog treated in the way described below relapsed on the eleventh day and had three attacks of running madness. The attacks were, however, mild compared with the falling fits from which it suffered before the treatment was begun, and the dog recovered rapidly.

i. For the sake of quiet and to avoid excitement we have kept the affected dogs shut up in dark stables giving them an abundance of warm bedding and taking them out each day (except on the day when worm-medicines are given) for an hour's gentle exercise.

ii. We have made sure that they are free from worms.

iii. Because dogs are carnivorous animals and need flesh-meat we have replaced the diet which is usual in this neighbourhood by dog-food or dog-biscuits containing meat, and a little Bovril.

iv. We have given them one grain of quinine three times a day.

The course of treatment lasted a fortnight, the diet for the first two days and for the fourth to the fourteenth days (that is, all except the third day) has been :

8 a.m., 10 to 14 ounces of Spiller's "Osoko" soaked in milk and hot water to which a teaspoonful of Bovril has been added.

9 a.m., a tablet of ammoniated quinine containing one grain of quinine sulphate.

3 p.m., another quinine tablet.

8 p.m., "Osoko," milk and Bovril as above.

9 p.m., a third quinine tablet.

After the last quinine tablet at 9 p.m. on the second day the dog was shut up and given no food of any kind, not even water, until after it had taken the worm-medicines on the following day (the third) when the diet was as follows :

8 a.m., three "Nema" worm-capsules No. 187 (veterinary), each containing one cubic centimetre of tetrachlorethylene.

10 a.m., a heaped-up teaspoonful of Areca Nut powder mixed with butter or bacon-dripping.

11 a.m., a pint of fresh milk.

8 p.m., " Osoko," milk and Bovril as usual.
9 p.m., a quinine tablet.

On the fourth day the generous diet of the first two days was resumed. After the fortnight was over the dog went back to work and medicines were stopped. But it was recommended that a little meat and bones, or dog-biscuits containing flesh, should be added to its usual food.

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It is hoped that this description of canine " hysteria " will prove useful in view of the fact that attacks, occurring always unexpectedly, are seldom seen by any but the dogs' masters. For detailing at such great length a course of treatment that has not proved efficacious, my only excuse is that some authority on dogs may thereby be spurred to suggest a better. It would be a very great boon if somebody could tell us how to avoid the disease, and, if the symptoms appear, how to treat it.

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# ABSTRACT FROM THE REPORT OF THE DEPARTMENTAL COMMITTEE ON THE RECONSTRUCTION OF THE ROYAL VETERINARY COLLEGE.*

(*Concluded.*)

### Government of the College.

After hearing the views of several members of the Governing Body, we make the following recommendations for the future government of the College :—

(*a*) A Court of Governors should be constituted representative of various agricultural and veterinary institutions or societies having interests in the College, as well as of public men and subscribers aiding its work, the Court to have a President and Vice-Presidents.

(*b*) The executive governing body having the management of the funds of the College and the direction of its work should be a Council constituted as shown below.

(*c*) The Court of Governors should take an important part in appointing the Council. The Court should meet at least once a

* The Complete Report can be obtained from H.M. STATIONERY OFFICE at the following addresses : Adastral House, Kingsway, London, W.C.2 ; 120, George Street, Edinburgh ; York Street, Manchester ; 1, St. Andrew's Crescent, Cardiff ; 15, Donegall Square West, Belfast ; or through any Bookseller. Price, 1s. 3d. net.

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year to receive and discuss the annual report of the Council and to make such representations upon it as they think fit.

The proposed constitutional machinery may be set out as follows :—

PRESIDENT :

VICE-PRESIDENTS :

COURT OF GOVERNORS :

To be composed of (*a*) the members of the Council (ex officio) ; (*b*) twenty representative members appointed by such bodies as the Royal College of Veterinary Surgeons, the Royal Agricultural Society of England, etc. ; (*c*) ten members elected from their own number of subscribers.

THE COUNCIL :

To consist of twelve members nominated in the following manner, who would appoint their own Chairman and Treasurer :

one by the Privy Council and three by the Government Departments principally concerned, viz. Ministry of Agriculture and Fisheries, Ministry of Health, and Colonial Office ;

four by the Court of Governors ;

four by other bodies, viz. University of London 1, Royal Society 1, Royal College of Veterinary Surgeons, 2.

The Council should meet regularly, say, once a month.

The educational and research work of the College should be under the general supervision of the Director or Principal. He should be present at all the meetings of the Council and act (with necessary clerical assistance) as their Secretary.

From the educational staff should be constituted an Academic Board consisting of the professors and readers, with rotating adequate representation of the junior teachers. The Director or Principal would be the Chairman of the Academic Board, and their normal channel of communication with the Council.

The Council would, as at present, be finally responsible for the affairs of the Research Institute, though its direct management would continue to be entrusted to a Committee which would include a certain number of outside scientific members.

If the recommendations are carried out, they will involve a capital outlay of approximately £325,000 ; an additional maintenance charge on the College which may be roughly estimated at £21,000 per annum, together with a sum of some £4,500 per annum and upwards to cover the cost of research in the professional departments ; and a substantial addition to the annual grant now made by the Ministry in respect of the work of the Research Institute. We realise that these are relatively

large figures, but we have before us three main considerations. First, the Royal Veterinary College, which is the oldest and most widely-known institution for veterinary education and research in the Empire, has been carrying out its work under conditions which are discreditable to a civilised community, and is now in imminent danger of closing down for lack of funds. We cannot think it right that there should be such an end to the labours of nearly a century and a half—labours, moreover, of which the continuance is imperatively demanded by the national interest. Secondly, it is useless to contemplate half measures ; if the reconstruction of the College is to be undertaken at all, it must be undertaken thoroughly. Thirdly, in its main outlines such a reconstruction must be designed to meet the requirements not of a few years but of the next half century, it is neither right nor possible to expect that the effort now required can be soon repeated.

Our proposals will, we think, seem moderate to anyone who reflects on the great importance of the dairying and live-stock industries, and on the immense national losses through diseases of stock. The veterinary profession cannot be expected to bear the burden of cost ; its numbers are small and its resources extremely limited. We can only conclude by saying that the interests of the community are deeply involved, and the community must decide whether it can afford to be content with anything less than an adequate and progressive system of veterinary education and research.

**Summary of Conclusions.**

1. The condition of the Royal Veterinary College is a national disgrace. The building is for the most part in a state of dilapidation and much of it has been condemned by the local authority as a dangerous structure. At the end of the current year the Governing Body will have exhausted all its funds, and the prospective income is insufficient to cover essential expenditure.

2. The ideals of scientific attainment desirable for a veterinary surgeon, and the status of the veterinary profession, have suffered by the lack of proper educational facilities and by the miserable conditions by which the College students have been surrounded.

3. The College needs rebuilding and re-equipping so as to meet not only the requirements for the education of the veterinary practitioner, but the need for officers to satisfy the growing demands of the State and public authorities. Provision should also be made for the proper training of veterinary surgeons for the colonial veterinary services.

4. In view of the increasing demand for adequately trained veterinarians both in this country and in the colonies, and of the

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educational facilities available at other centres, the rebuilding scheme for the Royal Veterinary College should allow for a total accommodation of 250 students with an annual entry of 75.

5. The question of site must be governed by two considerations ; first, the need for securing the steady flow of sick animals essential for the adequate instruction of students ; second, the importance of providing the veterinary students with facilities for intermingling with those in other branches of learning. For these reasons a rural site is undesirable. The College should be situated in the vicinity of a centre of population, and should be closely associated with a University.

6. London, with its vast population, ensuring the maintenance of adequate clinical material, and by reason of its accessibility, possesses many advantages as a centre of veterinary education. It is reasonably certain that the University of London would admit the College as a School of the University on conditions which the Governing Body (assuming their finances made it practicable) would be willing and glad to accept.

7. It would therefore be in the best interests of the College to remain in London and to secure recognition as a School of the University.

8. The future requirements of the new College, as briefly indicated in paragraphs 3 and 4 above, have been incorporated in outline plans. A building so planned could be erected on the present site at Camden Town, assuming that the existing buildings with the exception of the Research Institute, were demolished.

9. As the College has been at Camden Town since its foundation in 1791, where it has built up a considerable professional connection in that district, and no other area of land of sufficient size is available in the neighbourhood, it is desirable that the new building should be erected on the existing site, even though its size is only just adequate for the purpose.

10. The freehold of the existing site, if it can be obtained at a reasonable price, should be acquired, together with that of the adjoining site on the north side (now occupied by cottages) in order to permit of subsequent extension.

11. The estimated approximate cost of the suggested new building, including equipment, is £280,000. If the freeholds mentioned in the preceding paragraph could be secured for £20,000, the all-in capital cost of the rebuilding scheme may be put at approximately £300,000.

12. The cost of staffing and maintaining the new College would involve an additional charge on the College funds which may be roughly estimated at £21,000 per annum. It would be unwise to embark on the erection of new buildings unless such additional income were in

sight. Provision will also be wanted for the expenses of research carried on in the nine professional departments of the College, which may cost from £500 upwards per annum for each department, according to the extent of its research activities.

13. The Research Institute should remain where it is, but the existing maintenance grant of £5,000 per annum from the Ministry should be substantially increased. The Institute should also be provided with a field station in the vicinity of London for the purpose of experimental work with the larger animals, and a sum of £25,000 should be made available for its purchase and equipment.

14. More effective co-operation should be established between the College and the Research Institute.

15. The government of the College should be reconstituted under a revised Charter. Executive responsibility should be in the hands of a small body of men, selected for their personal qualities and acquaintance with the needs of veterinary education.

## Appendix A.

EXTRACT FROM THE REPORT OF THE COLONIAL VETERINARY SERVICES ORGANISATION COMMITTEE (CMD. 3261).

(The Committee was appointed in July, 1927, under the chairmanship of The Lord Lovat, K.T., K.C.M.G., K.C.V.O., C.B., D.S.O., and reported in November, 1928.)

* * *

18. But the trouble goes deeper than this. It is not merely a question of curriculum, but the conditions under which the training is given. In our opinion these conditions are profoundly unsatisfactory. The main cause is lack of funds. The first veterinary school was founded in 1791 and from the beginning has been handicapped in this respect. The other schools which have been formed later have all suffered from the same defect. As a consequence it has not been possible to offer sufficient inducements to attract enough qualified teachers. Most of the existing staffs appear to instruct in too many subjects and the accommodation and equipment at their disposal are often lamentably inadequate.

19. In order to check the disturbing evidence which we received on such points as these, we visited the Royal Veterinary College at Camden Town, by invitation of the Principal. We do not hesitate to say that we were dismayed by what we saw. While we were much impressed by the efforts which the Principal and his staff are now making under adverse conditions, we could not but receive a general impression of starvation and neglect. We noticed that the walls in many of the buildings were dangerously cracked and propped up by struts for the sake of safety. The students in the laboratories were so cramped that efficient work on their part seemed impossible. We were told that hot water was not laid on throughout the building and we noted that telephones and electric light were only then in process of being installed. What a contrast to the order and cleanliness and the wealth of modern resources and equipment which are so obvious in any of the medical schools attached to the

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great hospitals! It is nothing short of a national disgrace that such a condition of affairs should be allowed to continue. The blame, we think, does not lie with the teaching staff, labouring as they do under the great disadvantage of inadequate salaries in a school which is both inadequately staffed and equipped. On the contrary, they have made great personal sacrifices, and have themselves provided much of the existing equipment.

20. As in the Colonial Veterinary Departments, the root of the trouble is lack of funds and a certain apathy and lack of vision. Veterinary schools in this country receive but little help from the State and have to rely mainly on students' fees. When we compare the large veterinary institutions in other countries, supported principally by State funds, with those that exist in Great Britain, the contrast is somewhat depressing. We have already referred to the large annual appropriation from Government funds in the Union of South Africa: in Germany the Veterinary College of Berlin receives an annual grant from the State of the value of £28,000. Starved as they are of financial support and cramped and confined in their activities, it is clearly impossible for the veterinary schools to give a training of the scope and quality needed. The profession must needs suffer in efficiency and prestige, and consequently in the attraction it offers as a career to the youth of the country.

21. We have found it necessary to speak strongly on this matter, because the general policy in force seems to be one of drift, and new schemes are framed merely according to available funds and not on any comprehensive plan based on a true appreciation of what is needed. We are convinced that the problem of animal health is so important that the existing conditions both in the training institutions at home and in the Veterinary Departments of the Colonies should no longer be tolerated. In both a new policy is needed, framed on bold and comprehensive lines, supported by adequate funds, and carried through with energy and determination.

* * *

## Appendix B.

STAFFING AND ACCOMMODATION PROPOSALS.

The College will consist of nine departments as under:—

(1) surgery and obstetrics; (2) medicine; (3) animal husbandry, zootechnics, hygiene and State medicine and the production of meat and milk; (4) pathology, with bacteriology and animal parasitology; (5) pharmacology and therapeutics; (6) physiology with animal nutrition and bio-chemistry; (7) anatomy, surgical and applied anatomy, histology and embryology; (8) biology, protozoology, entomology and genetics; (9) chemistry with toxicology and elementary physics.

For these departments accomodation on the scale set out below is considered desirable:—

*Chemistry, Biology, Physiology, Pathology, Pharmacology.*

These five departments to have one classroom each. For chemistry and biology each classroom should be capable of accommodating 75 students. For the remaining three subjects provision for 50 students in each classroom would suffice. In addition, each department to have the spatial equivalent of six extra rooms (approximate dimensions 20

feet by 15 feet) to serve as a Professor's Room, an Assistant's Room and Laboratory, Service Room, etc., according to their individual needs.

*Anatomy (including histology).*

Six rooms to serve as a Professor's Room (corresponding to a classroom for 50 students), an Assistant's Room, a Bone Room for approximately 40 students, a Dissecting Room for 75 students, a Demonstration Room and a fairly large room for histological students.

*Medicine and Surgery.*

Five rooms for each subject. A demonstration theatre for sole use of surgery department should also be provided.

*Hygiene.*

Six rooms including a spare room (each comparatively small).

*Special considerations* supplementary to the above outlines :—

Chemistry Department.—One room should be a Private Laboratory for poison and water analysis.

Balance room for students' use—say six places—may be artificially lighted.

Biology Department.—Students' laboratory should be a long narrow room north lighted with two parallel benches and wall cases for specimens.

Physiology Department.—Benches 16 feet long by 4 feet 6 inches wide, each for eight students.

Pathology Department.—Requires media kitchen, special laboratory for serums and should be placed conveniently to Post Mortem Room.

Pharmacology Department.—Wall cases for specimens in Class room.

Anatomy Department.—Slaughterhouse and preparation room needed in connection with Dissecting Room and Demonstration Theatre, with means for moving carcases. Some storage space for live animals.

Medicine Department.—Waiting Room for Patients; clinical diagnosis room for medical and surgical consultation; pharmacy and drug store adjoining consulting room. This department should be contiguous to hospital.

Surgery department including hospital (see also under "Free Clinic").

Operating rooms for small and large animals with preparation, sterilising, and instrument rooms.

Provision for housing about 20 large animals (divisible into medical and surgical cases).

Fodder store, harness room, grooms' messroom.

Food preparation room, horse foot-bath, forge, destructor, covered manure pit, motor ambulance garage.

Reception stable near entrance.

Canine wards and kennels with bathing and feeding provision.

Cat and bird wards on upper floor.

Isolation kennels for dogs and cats with attendants' rooms.

Dressing and bandage rooms, ray-treatment rooms, photographic rooms.

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Covered ride for horse exercising; runs and exercise yard for dogs and cats.

Hygiene Department.—Room for exhibition of lecture models of construction, ventilation, drainage, foodstuffs, etc.

Laboratory for testing water, and other minor tests.

*Lecture Rooms.*—A large Lecture Theatre to seat 250 students and two smaller Lecture Rooms each for 100 students, available to any department, should be provided. The large theatre should be so placed as to be available also for public functions.

*Museum.*—A museum adequate to the needs of all departments, excepting for lecture specimens, which in some cases would be housed in class rooms.

*Library.*—A students' library, which it is suggested should also be fitted so that it may serve as an Examination Hall and for an occasional social gathering.

*Social Rooms.*—Common rooms for male and female students and for teaching staff, and a refectory with kitchen and other service provision.

*Cloak rooms, lavatories, etc.*, for students, staff, and special departments; storage for cycles.

*Administration.*—Public Entrance Hall with porters' and telephone boxes. Public Waiting Room, Clerk's Office, Waiting Room for use with Principal and Secretary's Offices. Principal's Room, Secretary's Office with Typists' Room. Board Room.

*Resident Staff Accommodation.*

A flat for the Principal.

Bed-sitting rooms for three single house surgeons with common room, bathroom, etc., and catering provision in connection with a housekeeper.

A small flat for a caretaker housekeeper (married couple) responsible also for the College catering.

A small flat for the head groom (married couple) near entrance to hospital, and so placed that care of House Surgeons' quarters may combine.

Rooms for second groom near back entrance to hospital.

*The Free Clinic.*

Reception hall for small animals.

Waiting room.

Some lavatory accommodation, male and female, 1 W.C. each, 1 urinal.

Consulting room—two tables.

Dressing room, with glass cupboard, instrument cases.

Operating theatre for small animals (free clinic only).

Sterilizing and instrument rooms in connection.

X-ray room and X-ray apparatus, ultra violet, for use of whole College, see under Surgical Department.

Professor's room.

Assistant's room, fitted as laboratory with centrifuge, microscopic work bench, sink, etc.

Small pharmacy for issue of medicine.

*Animal Accommodation.*

Two boxes, divisible into four stalls.
Forage space.
General store.
Ward for 12 kennels with run.
Ward for small animals.
Food preparation room.
Bath.
Attendant's room.
Isolation ward, say for 10 kennels.
Special ward for one or two kennels.

*Post-mortem Department.*

Post-mortem room.
Cold storage plant.
Sterilizing plant.

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# THE VALUE OF VETERINARY RESEARCH.*

By L. E. W. BEVAN, M.R.C.V.S.,
*Director of Veterinary Research, Southern Rhodesia.*

"Ex Africa semper aliquid novi."—Pliny.

It is a well-known fact that the ultimate prosperity of any country chiefly depends upon its pastoral industries, and in order that this prosperity may be permanent it is necessary that it should be built upon a sound foundation. To this end it is necessary to obtain an exact knowledge of the diseases to which the various species of live stock may be subjected, for it is only upon such knowledge that measures of prevention and control can be established.

Veterinary Research, therefore, may be regarded as a form of insurance against disease, without which the breeding of live stock for commercial purposes is constantly threatened with disaster. It is necessary only to mention the ravages of Rinderpest in South Africa in 1896, the enormous losses which have been occasioned by East Coast fever in this country, or by Foot-and-Mouth disease in Great Britain, to emphasise this point. Indeed, it might have been expected that this principle would be generally recognised and it is more than surprising to find that this is not the case.

## Neglected by the State.

Even in Great Britain, which produces the finest live stock in the world and where the pastoral industries are of primary importance,

* Reprinted by kind permission of the Editor of "The Countryside," Salisbury, Rhodesia.

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one finds Veterinary Science almost entirely neglected by the State. In recent issues of veterinary periodicals the following pathetic advertisement frequently appears :—

S.O.S.

TO OLD STUDENTS OF THE ROYAL VETERINARY COLLEGE.

YOUR ALMA MATER NEEDS YOUR HELP!

£250,000 REQUIRED FOR REBUILDING AND ENDOWMENT.

" The Pioneer College of the British Empire asks your aid to make it worthy of its proper position amongst the Veterinary Colleges of the world. Persuade your clients to subscribe and leave legacies. Address : The Earl of Northbrook, Royal Veterinary College, London, N.W.1." It is true that the Government has promised to subscribe pound for pound up to the sum of £35,000, but it is, to say the least of it, unworthy of the greatest stock-raising country of the world that the humble and often impecunious members of a small profession should be called upon to shoulder so heavy a responsibility. It is, as it were, " asking the horse to grow its own corn." And if the general science of veterinary surgery and medicine is in such a parlous state, can it be expected that any special branch of it, such as research, can fare better? Indeed, until recently, it scarcely existed except through the efforts and enthusiasm of a few self-sacrificing individuals. At the present time a few laboratories and research stations have been established, some aided by state, others by universities and colleges, but as compared with those in other countries they are insignificant and inadequate.

## A Policy of Drift.

The same lamentable state of affairs obtains throughout the British Colonies, and a Committee of very responsible and pre-eminent statesmen and scientists has recently issued a report on " Veterinary Research and Administration in the Colonies " from which the following paragraphs are selected :

" The unanimous report of this Committee has now been issued and in a general review of the situation, present and future, it emphasises the growing importance of veterinary activities in the Colonial Empire, not only from the point of view of the Veterinary, Medical and Agricultural Sciences, but also as an integral part of the social and economic

development of the Colonies. The important role which the veterinarian is called upon to play, shows the necessity of attracting to the profession men of high scientific training and attainment."

"It holds that veterinary problems in the tropics have not received the same attention as in temperate climates; and Britain, which in the past has done much for tropical medicine, tropical agriculture and tropical forestry, has done little for tropical veterinary science. The non-self-governing Colonies and Protectorates have stock-raising as one of their major industries, and losses from disease and lack of knowledge of health and nutrition, as well as absence of stock for transport and tillage, show the necessity of adequate veterinary attention."

"The Committee believes that the importance of this has not received the official attention which it deserves and veterinary departments are in general neglected and under-staffed. At present there are only 127 qualified officers in the Service, or one to every 16,000 square miles, 400,000 inhabitants, or 280,000 head of stock. The entrance to the Service is low and the emoluments do not attract sufficient men of the right type and there is no provision for even a preliminary course in Tropical Veterinary Science."

"The Committee has found it necessary to speak strongly on this matter, because the general policy in force seems to be one of drift, and new schemes are framed merely according to available funds and not on any comprehensive plan based on a true appreciation of what is needed. It is convinced that the problem of animal health is so important that the existing conditions both in the training institutions at home and in the Veterinary Departments of the Colonies should no longer be tolerated. In both a new policy is needed, framed on bold and comprehensive lines, supported by adequate funds, and carried through with energy and determination."

**At Onderstepoort.**

In other parts of the British Dominions the necessity for Veterinary Research has been recognised, and especially in the Union of South Africa, where the Laboratory at Onderstepoort, created by Sir Arnold Theiler, compares favourably with any other similar institution in the world, and where the excellence of the work performed has earned world-wide recognition. This establishment which must have cost at least a million pounds to build and equip, and upon which the sum of about £90,000 is spent annually on research, vaccine production, services and veterinary education, is a tribute to the foresight and sagacity of such men as Botha and Smuts who realised the importance of scientific research as a means of overcoming the numerous diseases

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which crippled the animal industries of the country and threatened their progress in the future. In a recent number of the journal of the South African Veterinary Medical Association, Dr. P. J. du Toit, the present Director of Veterinary Services, contributes a very illuminating article on "The Veterinary Services of the Union of South Africa." He describes these services as comprising the following activities :—

(a) The control of all important epizootic diseases, especially those enumerated in the Stock Diseases Act.
(b) Research work into animal diseases and general problems affecting the health of animals.
(c) Production of certain vaccines, sera, remedies, and other articles used in treating animal diseases.
(d) Advice to farmers and general propaganda work on veterinary matters.

A further function, which partly falls under the University of South Africa, is :—

(e) The training of veterinarians—for which purpose certain officers of the Division constitute the Faculty of Veterinary Science.

**The Need for Research.**

He describes how the necessity for research and for State veterinary control was brought home by the "rinderpest epizootic, which spread over South Africa during the closing years of last century and killed off in the neighbourhood of two million head of cattle. Investigators from various parts of the world were invited to study the disease, and the methods then evolved here in South Africa still form the basis of present-day control of this disease." He adds "it is safe to say that the knowledge gained during those years has enabled us to keep the disease out of the country during all these intervening years, and the money spent on that research has undoubtedly been repaid a thousand-fold and more. . ." It is unnecessary to point out that Rhodesia was also devastated by this disease and must attribute its freedom from it to-day to veterinary research. The disease still exists to the north in parts of Central Africa, but thanks to science no longer constitutes the menace which it did before the very effective serum method of inoculation was discovered.

**East Coast Fever.**

Du Toit also deals with East Coast fever and states: "If we have not been successful in the course of the last twenty-five years in completely stamping out this disease, the fault does not lie in our lack of knowledge, but in the almost insuperable practical difficulties attending the measures of eradication. Nevertheless, sight should not be lost of the fact that, in the case of this disease, too, the direct result of re-

search work has been a saving of enormous sums to the country. What the position of the beef and dairy industries would have been to-day if the disease had never been investigated, it is difficult to estimate. Only ignorance of the facts can explain the statements which are still sometimes made, that it would be better to remove all restrictions and let the disease run its course." He then proceeds to discuss some of the more important diseases against which vaccines and other laboratory products are issued. For example, blue-tongue, a disease which " has probably been present in South Africa as long as sheep farming has been practised." He shows that in 1907 a vaccine was issued which conferred protection against this disease, and that since that date more than twenty-three million doses have been issued. He arrives at the conclusion that probably three million sheep have been saved during those years as a result of the preventive inoculation and that at least three hundred thousand sheep are saved annually from certain death. He proceeds to point out that last season more than twenty-three million doses of wire-worm remedy were issued and adds " when we take into consideration the serious losses from this disease which sheep farmers suffered prior to the discovery of this remedy, and the losses which occur in other countries to this day, it is safe to say that the benefit to South Africa may be calculated in hundreds of thousands, if not millions of pounds annually. In many parts of the country profitable sheep farming would be impossible without this remedy."

With regard to Anthrax he says : " The vast majority of the two to two and a half million animals vaccinated annually are exposed to infection and if we assume that only a quarter of them would actually have contracted the disease had they not been immunised, we arrive at a saving of half a million animals annually."

Referring to Horse-sickness, he writes : " The parlous state of the horse industry in South Africa to-day must partly be ascribed to the prevalence of horse-sickness. Much time and energy have been devoted to the study of this disease, the main object being to find a satisfactory method of immunisation. The immunisation of mules has been eminently satisfactory, and since 1903 many thousands of mules have been immunised with excellent results. It has been stated that, if Onderstepoort had achieved nothing else than the immunisation of mules against horse-sickness, it would have justified its existence." " In the case of horses the method has not been so successful, it being much more difficult to immunise a horse than a mule."

The above extracts and figures give some idea of the enormous benefits which have been derived from veterinary research in South Africa, benefits in which, it should be remembered, Rhodesia has been permitted to participate.

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# Clinical Articles

## Stricture of the Urethra in the Horse.

By R. HUDSON, F.R.C.V.S.,
*Retford.*

THE subject was a shire gelding, six years old.

*History :*—He had been castrated as a yearling and the operation had passed off normally, as far as the groom was able to tell.

He was broken at four years old and soon after it was noticed that he had a discharge from one side of the scrotum.

When put to work he was noticed to have urinary trouble, in that he frequently urinated in small quantity, and that it dribbled away when he was standing.

During the two years he worked light, and it was only by resting and good feeding that he was kept strong enough for work. He was a keen, good worker when fit to do anything.

For some months difficulty in passing urine has been increasing, but he has always been able to pass it in a small stream, sometimes straining hard without making much increase in the volume passing after straining. The urine continued to dribble away, his penis hanging for about a foot, and retraction taking place when moved.

The urine passed has varied, sometimes being clear, but often with stringy mucus-like clots.

For some time now he has bitten and licked at his flank about the ext. angle of the ilium but at no time has he shown any " colic " pain.

When seen by me in March, 1929, he was refusing food, breathing increased, pulse 85, temp. 103° F., licking repeated at his flanks, stretching, and passing urine in a thin stream.

Pressure at the end of the urethra yielded a few drops of pus-like material ; which, on microscopical examination showed an abundance of streptococci.

An examination per rectum revealed the bladder to be about half distended, and on each side of the neck two large saccular dilatations. The naturally enlarged ends of the vasa deferentia could be plainly felt and the dilated sacs lay across and to the sides of them.

The scrotal wound on the right side (castration) had not healed and was exuding a small quantity of sticky grey pus. Thickening of the testicular cord could be traced to the inguinal ring.

The horse was observed daily for some days and given 8 oz. sod. chlor., 1 oz. formalin in $2\frac{3}{4}$ galls. of water by tube.

He improved in appetite and general symptoms and on the second day the saccular dilatations could scarcely be felt.

The case was diagnosed as abscess formation in the vesiculæ seminalæ, and infection of the urethra due to the process passing along the vas deferens.

Owing to the septic condition of the urethra a catheter was not passed for fear of spreading infection to the bladder which did not appear, on rectal examination, to be abnormal, though it never felt empty.

Although improvement took place during the few days he was under treatment it was evident that the dilated sacs were still there, and I thought they were causing pressure on the neck of the bladder and difficulty in passing urine; so I decided to puncture them per rectum.

This was done with a long seton needle on the right side only, because the horse strained so badly and partly everted the rectum.

Some fluid escaped which smelt of urine, and no doubt a quantity did escape into the rectum and caused irritation and straining.

After the operation the sac could not be felt.

During the next 48 hours the horse refused all food, his pulse rose, and he looked depressed and sleepy. His mucous membranes became highly coloured, but later cleared. He had difficulty in passing fæces, and the urine dribbled from the urethra as before.

He became semi-conscious, probably from uræmia, and I thought urine might be entering the peritoneum as well as the rectum so he was destroyed.

**Post-mortem Examination.**

On opening the urethra the mucous membrane was found to be covered with a diphtheritic deposit. At intervals along the lower portion for about one foot were five strictures. The upper one almost occluded the track.

The pressure of urine having forced a diverticulum about three inches long along the side of the urethra.

The pelvic portion of the urethra was widely dilated admitting my hand freely into the bladder, and four fingers into both ejaculatory ducts which, when opened, allowed my hand to pass into the vesiculæ seminalæ.

The right vesicle would have held a quart of fluid and the left about one pint. They contained a quantity of urine and deposit similar to that on the urethra. The bladder at the base was about one inch thick.

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The mucous membrane inflamed and covered with a blackish-grey deposit.

Search was made for the rectal wound and it was traced into the right vesicle, but there was no evidence of further penetration into the abdominal cavity.

The area around the penetration was not so bad, and it was evident that urine had been escaping along the track into the rectum and into the tissues along side it, but not for far.

The kidneys were macroscopically healthy, and the abdominal organs also presented a healthy appearance.

The vasa deferentia contained a grey pus which, on microscopic examination showed pus organisms.

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## Choking in Cattle.

By R. HUDSON, F.R.C.V.S.,
*Retford.*

THE feeding to cattle of large quantities of unsold potatoes has been productive of many cases of choking here recently, and their dry rough and soft condition has made the removal of the obstruction more difficult than usual.

When the obstruction has been below the middle of the neck it has usually been forced with the probang into the rumen with safety, but when it is a few inches from the pharynx the removal has often been attended with serious injury.

There is usually some farmer in the village who fancies himself with the "choke rope," one of the bullet ended type, which usually does damage by slipping off the obstruction and lacerating the wall of the œsophagus. Three such cases happened in one week recently, and either died or necessitated slaughter. When the obstruction is within reach of the fingers with the hand in the pharynx, and effort is usually made to withdraw it into the mouth, and in my experience it has generally been "some job" and to simplify it I have adopted the following procedure with satisfactory results.

One cannot pass the hand down the mouth of cattle many times without it being scratched by the sharp molars, so it is best to spend a minute or two rasping off their points. Any old tooth rasp, heated to red heat and bent up at the end does this very well. It should be re-heated and slaked in cold water to regain its temper. The animal is cast on its right side and the mouth safely gagged. Having located the obstruction from the outside of the neck, the jugular vein is filled

up by pressure from below and an incision about 3 inches long made below its lower border or below the submaxillary vein on a level a little in front of the obstruction. Cutting freely through the underlying muscle one enters an area of loose connective tissue and seeking the rear of the obstruction with the right index finger it is pushed into the pharynx to be received by the fingers of the left hand and withdrawn out of the mouth.

One has not time to carry out the best of surgical precautions, so the wound is better left open, plugged lightly with wool soaked in carbolised oil and dressed so for a few days.

In the first case operated on in this way the obstruction, a very large potato, was pushed up with a piece of strong wire which was forced into the potato through the wall of the œsophagus, but I found later that I could manage with my finger and so avoid any unnecessary injury.

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## Methods of Milking in Venezuela.

By E. MORGAN, F.R.C.V.S., D.V.H.,
*Valencia, Venezuela.*

" Whene'er I take my walks abroad
What bally fools I see,
But such the justice of the Lord
They think the same of me."

(With apologies to Mr. Robert Blatchford
and the Cambridge Don.)

WHEN one arrives for the first time in a foreign country and should he be interested in the handling of stock, he would probably observe that the methods are often quite distinct from those which he has been accustomed to deal with, and this might cause one of a critical trend of mind to express his opinion too freely, instead of reserving it until, in the majority of cases, he would be satisfied that there were good reasons for adopting such methods. Soon after my arrival in Venezuela I could not avoid thinking that the methods here of handling milch cows and their calves during milking time were something barbarous, and that there could hardly be any reasonable excuse to offer for such procedure, especially with cows which had previously been handled for several seasons.

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**Procedure.**

In the majority of cases the cow is tied either by the horns or neck to a strong post in the yard, or, should the animal be a little more docile, a man holds the rope instead. Again, if the animal has been milked for one or more seasons, this rope is only held until the milker

gets the calf tied by means of a piece of rope around the neck to the foreleg of the cow. This is done after the calf has had time to taste its mother's milk and so stimulate the milking organs, the calf being the only one which has the desired effect, and naturally it must be the cow's own calf. The cows are brought into the yards in the late evenings from the fields, where, in the majority of cases, the calves are allowed to follow, but are kept apart during the night until the milking operation commences, when they are allowed out one by one by each milker and allowed to join their respective mothers. One might think that a cow, irrespective of breed, should yield her normal quantity of milk, whether the calf is present or absent, but such is not the case, so we have to admit here again that the old term " blood will tell " holds good, especially while observing the vast difference in temperament between the Venezuelan pure bred cow and the British cow, when both are being milked under the same conditions.

The Spanish breed of cattle, viz. cows and bulls, etc., are of a nervous disposition. This is rather a strange expression concerning a breed of cattle which can face jaguars, alligators and toreadors, and which will fight until they drop dead. Nevertheless they are nervous

cattle, and this accounts for the great care that is needed before even a limited quantity of milk is obtained from them. The normal quantity is about half a gallon per day (cows are only milked once a day in Venezuela). Should a calf die, as is often the case, then the owner must either abandon milking this particular cow until her next calving, or if the dead calf is found, its skin is removed and placed at milking time over another calf, as shepherds do with skins of dead lambs in order to deceive the mother. Naturally the shepherd does so in order to influence the ewe to adopt a motherless lamb, but here in the case of the calf it is done in order to get the cow to yield her milk, otherwise she is cast away for the season because she withholds her milk to such an extent that in most cases after a few weeks have elapsed, the quantity yielded is not worth the trouble and expense for milking, so it is futile to expect only a small percentage of the normal quantity unless the calf or its skin is present. The small quantity is obtained only with great trouble and difficulty, as the animal is all of a tremble unless the calf is alongside, thus the reason for tying the calf to the foreleg of the cow in order to calm her and to make her realise that the calf is near to take a share of the milk, as the custom is to leave one quarter with the milk undrawn and the calf is allowed to take this as soon as the other quarters are stripped by the milker.

During the last ten years we have imported British bred bulls in order to cross them with the pure native bred cows all of Spanish origin. From a dairying point of view the results have been most satisfactory, not only in the quantity of milk obtained, but also in the change from wild to docile animals. The half-bred cows, young and old, can be milked in the same manner as cows are milked in Great Britain, either loose in the yards or in stalls, and it is immaterial after the lapse of a day or two whether the calf is present or not, because the yield of milk remains normal. This is of great importance as it saves labour and the average yield of milk can be relied upon.

This subject is of great interest from a physiological point of view. It goes to prove that the milk yield depends to a great extent upon the nervous temperament of the cow. A milker here is considered a very poor hand unless he is able to sing while milking. This has been proved beyond doubt to have a great effect in calming the animal, so music hath charms to soothe even the wild cows of Venezuela in order to obtain more milk, but the effect of the music is the reverse with people who are anxious to have a quiet sleep sometime about 3 a.m., when about half a dozen cow-boys are singing at top-notes in the yards while milking the cows.

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## Maggocytic! Surgery.

(As Applied for Removing Small Tumours and Sitfasts.)

By E. MORGAN, F.R.C.V.S., D.V.H.,
*Venezuela.*

"Necessity is the Mother of Invention." A few months ago during one of my travels in the interior of Venezuela, my saddle-horse got tired and I inquired at a certain ranch for another animal, so as to allow mine to rest until my return. The first horse offered me had a hard tumour or "sitfast," caused by a badly fitting saddle. This animal I refused to accept. On my return journey, after three weeks had elapsed, I called at the same place and asked to see the horse again, which was brought forward. To my surprise I found instead of the hard growth, a rather deep but even wound which resembled at first sight an ulcer, but on closer examination it proved to be a wound which was rapidly healing, with nothing further than the application once daily of neat creolin. Upon questioning the attendant, he explained that the tumour was removed in the usual way, which was as follows :—

Firstly the surface of the growth is scraped by a knife until a little blood appears. This is allowed to clot, so as to form a culture ground for eggs of the "blue-bottle" fly which can easily be found in a hot country on any animal with a slight wound or abrasion. These eggs are carefully lifted by means of a knife-blade and are placed on the abraded surface of the tumour where maggots soon hatch and feed and burrow deeper and deeper into the tumour and around its base until it gradually disappears leaving a cavity instead of a tumour. When it is considered that the maggots have consumed the whole growth, they are destroyed by means of pure creolin. As might be expected, the maggots do not confine themselves within the boundary line of the tumour, but gradually extend to the healthy tissue, but this is carefully watched by the attendant.

Since the above occurred I have made inquiries and find that it is quite a common method in the interior of this country to breed maggots on tumours in order to consume them.

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## A Peculiar Case in a Dog.

By FRANK CHAMBERS, O.B.E., F.R.C.V.S.,
*Wolverhampton.*

The subject of this note is a Great Dane, male, aged $2\frac{1}{2}$ years. I suspect that he has been castrated, for there is no evidence of testicles

but some remains of a scrotum. He is very docile and lazy with an inclination to put on fat. The left foot is deformed and almost club like, due to the fusion of the two middle toes.

In February, 1928, he had several interdigital cysts on the deformed foot, and during the winter months used to wear a specially made boot. If he went out into the snow without this boot a cyst usually followed. In December, 1928, he commenced to have epileptic fits and they came on every tenth day until the period lengthened out to 16 days. As the owner was at this time moving about, several practitioners saw and treated the dog without any apparent result. Luminal was not used, as far as I could determine. The owner returned home in June of this year, and the dog had several fits on June 17th. I prescribed luminal in gr. doses night and morning. On June 20th I gave a subcutaneous injection of artificial blood serum 300 cc., and left pot. brom. in gr. 20 doses to be given night and morning. On June 22nd another injection was given and a third one on the 25th with .5 cc. insulin. The pot. brom. was gradually reduced. He had another fit on July 18th, thirty-one days having elapsed since the last fit. This was the longest interval that he had had between fits since December 28th. I saw the dog on July 18th and gave chlorotone for a few days in conjunction with the pot. brom.

On July 23rd a subcutaneous injection of 300 cc. of artificial blood serum was given. A small abscess resulted from this last injection. The club foot has now become affected again, and to make matters worse, two cysts had made their appearance on the right foot. This was the first time that the right foot had been affected. Both feet were very painful. Poultices of cataplasma kaolin. co. were applied and from the cysts or abscesses small strings of tissue were obtained which resembled small nematodes. I examined some of these "worms" under the microscope, and came to the conclusion that these were not worms but strings of tissue. On August 5th I put the dog on to collosol manganese (oral). Shortly afterwards the dog accompanied his mistress to the seaside and whilst there had two fits, but they were very mild and of short duration. At this time he was not receiving any pot. brom. In September another fit (third one since June) took place exactly 50 days since the last one. The intramuscular injection of collosal manganese is now being tried to assist the foot lesions. They are certainly better and the dog walks with greater ease than he did.

The strange feature about this case is that before I saw the dog the owner states that when the fits were at their worst the foot was more or less normal, whereas when the cysts appeared no fits took place. As soon as a cyst burst and the pain went a fit would usually take place.

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The dog has only had three fits since the bad one in June, that is after the subcutaneous injections of artificial blood serum were given, and those fits that have occurred have been very slight ones. This would seem to show that this line of treatment has been of benefit. The club foot has been bad most of the time and as it is now practically normal it will be interesting to see if the fits will recur. No bromide has been given for some time now.

## Further Notes on the Prevention and Cure of Rickets in Monkeys.

By E. M. HUME, N. S. LUCAS and H. HENDERSON SMITH.
*From the Department of Experimental Pathology, Lister Institute, London.*

In 1927 the writers reported their success in the cure and prevention of rickets in monkeys by the use of ultra-violet light. Since that time considerably more experience has been gained, particularly as regards the prevention of rickets in monkeys, living as pets in the home and as regards the breeding of marmosets.

When rickets has already developed seriously in a pet monkey there is no doubt that irradiation with ultra-violet light is the easiest means of curing the condition ; the writers have only seen one case which could not be cured by that means ; the animal was a common marmoset, completely bed-ridden, with distended abdomen, deformed chest and bones bent in all directions. Other bad cases have been examined and it has sometimes been felt that it would really be better to kill the animal, which was obviously in much pain. In every case, however, excellent results have been obtained after a few weeks' treatment and even though much permanent deformity remained, the bones have hardened again and the animal has appeared fully able to enjoy life. It is indeed one of the most gratifying forms of cure that can be undertaken. Monkeys which have been cured in this way include a number of common marmosets, three Geoffroy's tamarins and a capuchin monkey. The cure was in every case effected with an exposure of from 10-20 minutes daily to a mercury vapour quartz lamp. Some of these monkeys on returning home received prophylactic treatment with a lamp ; a small carbon arc, such as the Quain or Sunivray, which can be purchased for somewhere about £5, has been found satisfactory, and an exposure of 20 minutes daily is usually given. To many owners of monkeys, however, such a lamp represents too great an expense, and where this is the case the monkey can usually be kept in health by a daily oral administration of vitamin D, the bone-calcifying vitamin, in the form of Radiostol (prepared by the

British Drug Houses, obtainable at most chemists). This preparation is usually well taken but sometimes the animal has to be coaxed to take it and some monkeys absolutely refuse. Radiostol can be given as an oil ; about five drops daily on granulated sugar, or other favourite food, in a spoon, is usually well taken, or it can be bought as small sugar-coated pellets which some monkeys take more readily. It has proved effective in the case of several very young marmosets, kept as pets, for they have survived the winter, grown and thriven in a way they could never have done without it. Of course all owners of such pets have made every possible use of the summer sun in the open air, *through glass it is ineffective*, to reinforce the action of the Radiostol, but exposure to the sun should always be done judiciously, giving the animal the option of shade. A young woolly monkey was restored from a condition of helplessness to one of complete activity, by dietetic means alone, coupled with such sunshine as could be got on board the ship on which it chiefly lived. It received Radiostol, cod-liver oil and malt, beaten up raw egg and milk as sources of vitamin D.

Both Radiostol and ultra-violet light keep marmosets in such good condition that they are able to breed. The writers use ultra-violet light and have, at the time of writing, five English-bred marmosets, a male three years old, twin females a year old, and twin males six months old. No second generation has yet made its appearance but the females are only just adult. The three year old male has fathered young by a Brazilian female. Miss Ninette Austral, of Sidcup, has been successful in breeding marmosets by using Radiostol as the prophylactic means against rickets and she is the owner of male twins five months old. The charm of a marmoset family in which twins are the rule and triplets not infrequent, and in which the father takes his full part in carrying and minding the babies cannot be exaggerated. Breeding can be carried out in quite a small cage and presents no special difficulties if anti-rachitic prophylaxis is adequately carried out.

A species with which the writers have not heretofore been so successful is the squirrel monkey. The amount of irradiation with ultra-violet light which is sufficient for the marmoset is certainly not enough for them ; one squirrel monkey developed rickets in the writers' possession when receiving treatment similar to that given to the marmosets. It seems probable, however, that 30 minutes daily is a sufficient exposure for them, to the mercury vapour quartz lamp ; another squirrel monkey, a very young one, has grown and thriven admirably on that dose. In their dietary habits these animals differ greatly from marmosets, for they are passionately fond of newly born rats, eggs and chicken embryos, as well as all kinds of insects, which marmosets also like. Though not nocturnal themselves, like their relations the

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Douroucolis, they belong to the group of night monkeys and may have been accustomed to rely on a diet of animal food as their source of supply of vitamin D, rather than on the rays of the sun. Investigation of each species will easily reveal what is the most suitable and most convenient form in which to administer anti-rachitic treatment, but that it should be adequately administered is a *sine qua non* of monkey keeping.

# Reviews

**Manual of External Parasites.** By H. E. Ewing. London. Baillière, Tindall & Cox. Price 20/- net.

This slender volume of 225 pages is written for the American market, but contains excellent keys for tracking down the world's genera of Mites, Ticks, Biting Lice, Sucking Lice and Fleas. The illustrations are good, photographs being supplemented by careful pen and ink drawings. *Sed beati divites!* T. J. E.

**Insects, Ticks, Mites and Venomous Animals of Medical and Veterinary Importance.** Pt. I, Medical. By Patton and Evans. The Liverpool School of Tropical Medicine. Price 20/-.

This is our old and valued friend Patton and Cragg metamorphosed into a class-book for students at the Liverpool School. The first six lessons form an excellent introduction to the study of Entomology by way of the Diptera, and one envies the student who is privileged to take the whole course. Its arrangement as a class-book in no way reduces the utility of this volume as a book of reference, or as a practical guide to the study of a particular entomological problem. Such misprints as *Ctenopthalmus* and *Nycthotherus* are editorial prerogatives, but *Anopleura* without apology leaves one scratching a bewildered head. The continuation of this fine book will be a welcome addition to veterinary literature. T. J. E.

**Laboratory Guide to Vertebrate Dissection for Students of Anatomy.** By Dr. A. B. Appleton, Lecturer in Anatomy at Cambridge. London. Cambridge University Press. Price 6/- net.

In order to derive full benefit from the course outlined in this book the student should, in addition to the usual elementary course of dissection of dogfish, frog and rabbit, have completed the professional study of the anatomy of man or horse. For such a student this book provides an evolutionary anatomical survey of the vertebrate series, with the author ever at his elbow asking the most apposite and searching questions. Anatomists of longer standing and writers of textbooks would do well to note and discuss with themselves the author's suggestions for the systematizing of the muddled nomenclature of vertebrate comparative anatomy. T. J. E.

# Personal

## University of London.

M.Sc. Examination for Internal Students. Veterinary Science. Congratulations to Mr. Arthur Wallace Stableforth, of the Research Institute, Royal Veterinary College, on his success in obtaining the M.Sc. of the University of London.

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